

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LIME POND	Lake Area (ha): 4.65
Town: COLUMBIA	Maximum depth (m): 4.3
County: Coos	Mean depth (m): 1.7
River Basin: Connecticut	Volume (m ³): 81500
Latitude: 44°52'18" N	Relative depth: 1.8
Longitude: 71°29'22" W	Shore configuration: 1.31
Elevation (ft): 1415	Areal water load (m/yr): 10.16
Shore length (m): 1000	Flushing rate (yr ⁻¹): 5.80
Watershed area (ha): 75.0	P retention coeff.: 0.55
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

		2 February 2000	10 August 1999
DOM. PHYTOPLANKTON (% TOTAL)	#1	VERY SPARSE	TINY PENNATE DIATOM 40%
	#2	TABELLARIA (100%)	DINOBRYON 40%
	#3		RHIZOLENIA 10%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			8.77
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 34%	KERATELLA 87%
	#2	POLYARTHRA 34%	NAUPLIUS LARVA 9%
	#3	MYTILINA 29%	
ROTIFERS/LITER		362	171
MICROCRUSTACEA/LITER		<1	22
ZOOPLANKTON ABUNDANCE (#/L)		372	195
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			1.1
BOTTOM DISSOLVED OXYGEN (mg/L)		5.7	6.1
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		5
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:

Lake: LIME POND

Town: COLUMBIA

	2 February 2000		10 August 1999		
DEPTH (m)	1.0	2.0	1.0		3.0
pH (units)	7.7	7.8	7.7		7.6
A.N.C. (Alkalinity)	84.4	85.9	85.9		85.0
NITRATE NITROGEN	0.12	0.16	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.43	0.10			
TOTAL PHOSPHORUS	0.011	0.008	0.015		0.021
CONDUCTIVITY (μ mhos/cm)	198.9	199.4	185.3		186.3
APPARENT COLOR (cpu)	19	19	27		28
MAGNESIUM			3.61		
CALCIUM			33.0		
SODIUM			1.8		
POTASSIUM			2.21		
CHLORIDE	4	4	2		2
SULFATE	12	12	5		5
TN : TP	50	33			
CALCITE SATURATION INDEX			1.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1999

D.O. S.D. PLANT CHL TOTAL CLASS

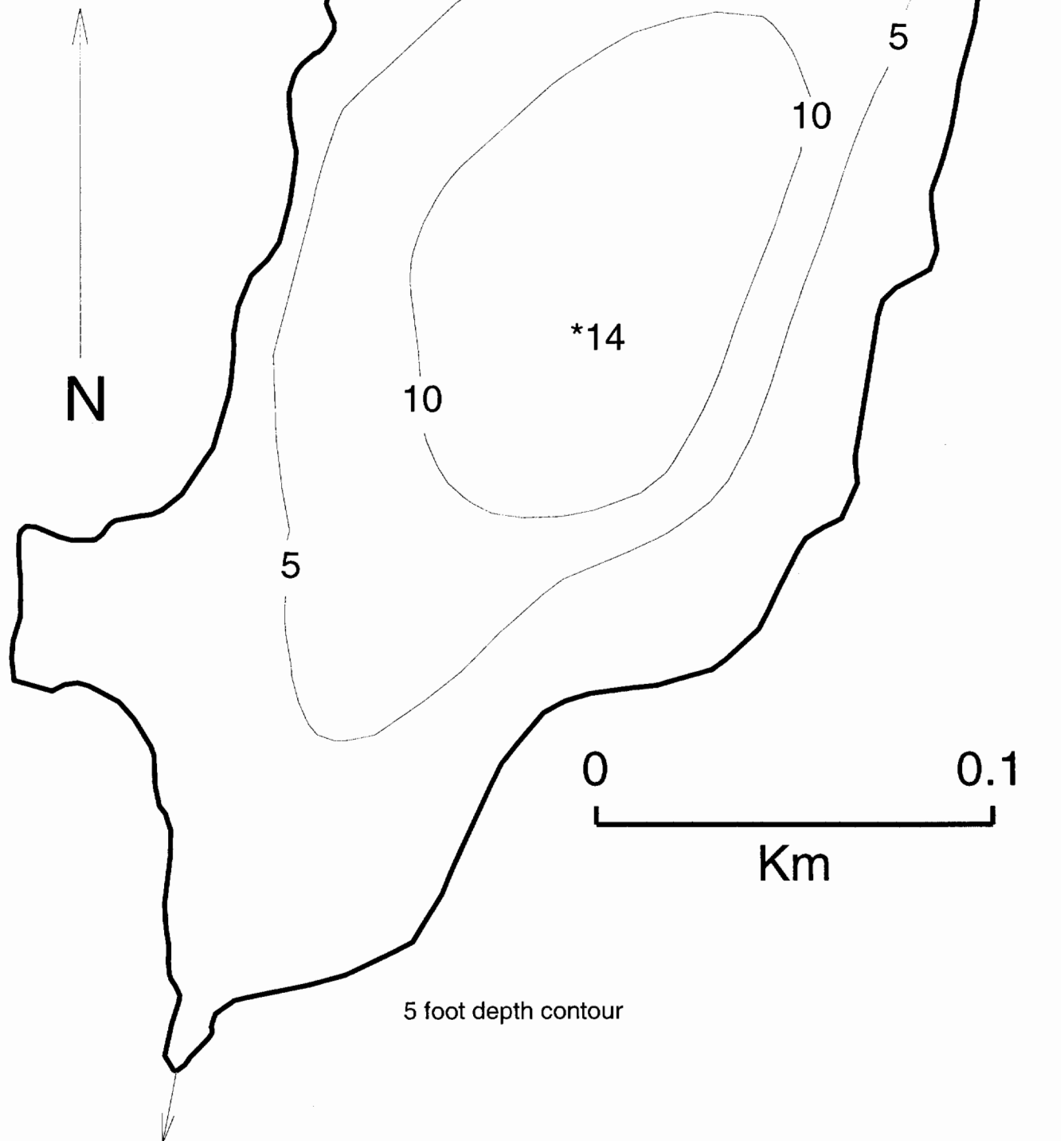
**	4	1	2	7	Meso.
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COMMENTS:

1. Lime Pond was previously surveyed and classified in 1985. There was no change in classification and little change in water quality between the two dates.
2. This is one of a very few New Hampshire ponds that lies in a more calcareous setting rather than the typical granitic bedrock. It has the highest natural alkalinity of any pond in the state. It also has the highest natural calcium value of any New Hampshire lake and the conductivity is high for a relatively remote, undeveloped watershed.
3. The water had a green cloudy appearance and water clarity was relatively poor, but the algal abundance (chlorophyll) was not abnormally high.

Lime Pond

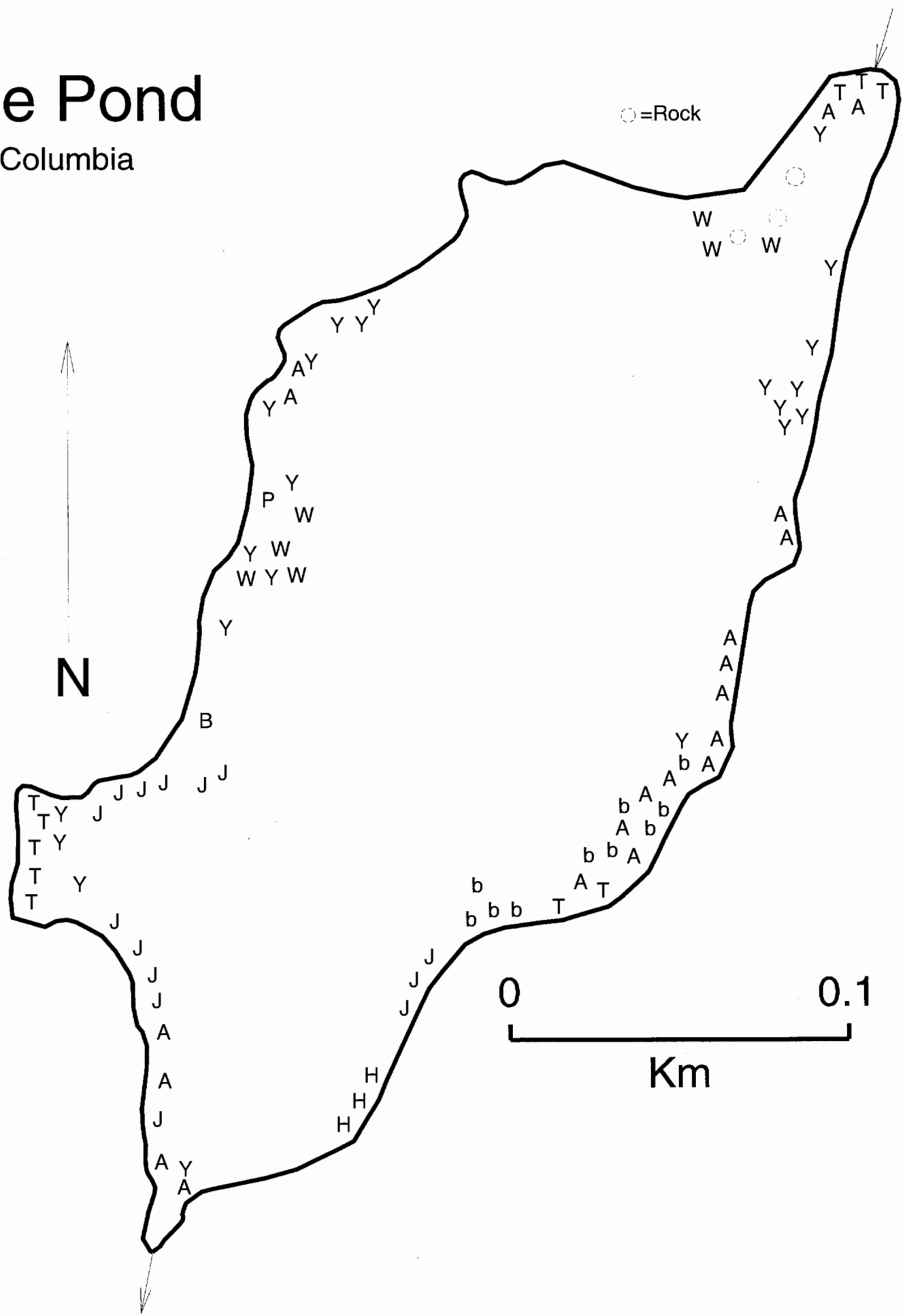
Columbia



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Lime Pond

Columbia



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